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PAIN MANAGEMENT IN CRITICALLY ILL-INTUBATED PATIENT: A LITERATURE REVIEW

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ABSTRACT

BACKGROUND: Pain is classified as one of the least understood symptom because it is a subjective concept and only can be defined by the individual who experiencing the pain. Among critical care patients, pain also being a problem to be managed. This condition based on the reason that the patients in ICU were suffering by complex problems and considered in a life threatening condition. PURPOSE: The purposes of this study explore the pain management among critically-ill intubated patient. METHOD: A relevant literature searched from databases: PubMed, CINAHL, the Cochrane and ProQuest Medical Library, and Science Direct were conducted. Key words used to retrieve included pain management, pain assessment tool, intubated and unconscious patient, and critically ill patient. Searching was limited in English language, full text, and the year of publication starting from 1994. RESULTS: Twenty-four related studies were intensively reviewed. Firstly, the concept of pain in critical care was described. Then, the barriers of pain assessment and management, pain related factor in intensive care unit, and pain assessment tools in critically ill-intubated patientare explained. Moreover, in order to develop appropriate pain management in critically ill-intubated patient, the pharmacological and non-pharmacological intervention are reviewed. Finally, the nursing roles and activities for appropriate pain management in critically ill-intubated patients are described later.CONCLUSION: Literatures showed that critical care nurses (CCNS) holding the roles and responsibilities to deliver appropriate pain management in critically-ill intubated patients. This requirement are important in order to relieving and diminishing pain that feel among critical care patient, in particular unconscious and uncommunicative patients who cannot provide self report regarding their pain intensity and severity.

Keywords:Pain management, pain assessment, unconscious patient, critical care, and critically-ill intubatedpatient.

PENDAHULUAN

Despite being one of the most commonly occurring symptoms in the medical world, pain was considered as one of the least understood symptom (Joy, 2009). As a subjective concept, pain can only defined by the individual experiencing the pain (Büyükyilmaz & AstI, 2009), and this symptom is commonly showed by a client's reaction to pain in intensely personal and account for the great variability from each person (Black & Hawks, 2005). Furthermore, until now pain has been being a problematical area in research and practice whether the pain management for the patients are deliver with properly, in particular those who admitted to the intensive care unit (ICU) (Cade, 2008).

The ICU was set up to handle the care of patients who suffering by complex problems and considered in a life threatening condition. Among these patients, pain is considered as the most common problem for the critically ill patient (Ahlers et al., 2008). Approximately, one-half of critical patients recalled having had pain during care in the ICU (Mann, 2006).

Moreover, pain is more significance higher and often under medicated because the routine procedures and treatment that must be taken for the critical patient (Young, Siffleet, Nikoletti, & Shaw, 2006). As a result, pain will produce a negative psychological and physiological consequences (Cade, 2008), and increase the risk for morbidity and mortality in critically ill patients if we're not taking care immediately (Ahlers et al.).

In a study conducted by Puntillo (as cited in Shannon & Bucknall, 2003), it was found that approximately 2/3 of patient in ICU rated their pain as moderate to severe in intensity and most of them showing their pain with eyes, or by leg movements or by

reaching out for the nurse's arm. In another study by Stannard et al. (1996) as cited in Aslan, Badir and Selimen (2003) noted that although nurses did administer the prescribed analgesics, patients still complained of unsuccessful pain control. This evidence shown the importance to assess the level of pain, in particular by critical care nurse in the ICU in order to deliver appropriate pain management among critically ill patients (Shannon & Bucknall, 2003).

Furthermore, an increased focus on pain management programs and the development of new standards for pain management are moving forward now (Ene, Nordberg, Johansson, & Sjostrom, 2006), but the effectiveness of pain management for the critically ill-intubated patient as an important stressor for critical care patients in the ICU (Cade, 2008) still faced a number of barriers. These barriers including patient's ability to communicate verbally (Ahlers et al., 2008; Gelinas, Fillion, Puntillo, Viens, & Fortier, 2006; Herr et al., 2006), technology, knowledge and time constraints (Shannon & Bucknall, 2003).

Based on the several reasons above, pain is considered as an important problem in critical care patients. It's mean that pain management among these patient must be in a priority to be solved (Gelinas, Fortier, Viens, Fillion, & Puntillo, 2004). In order to develop the effective pain management in critical ill-intubated patient, the appropriate pain assessment must be adequately covered by the nurses (Gelinas et al., 2006), by interpreting any important sign and symptom through to their senses of observation, hearing and touch (Aslan, Badir, & Selimen, 2003).

OBJECTIVES

This study aims to explore the pain management among critically-ill intubated patient. The specific objectives of the study as follow: 1) To describe intensity of pain that experienced by critically ill-intubated patients. 2) To examine the appropriate pain assessment tools among critically ill-intubated patients. 3) To evaluate evidence based interventions to reduce pain among critically ill-intubated patient

METHODS OF THE STUDY

To meet the objectives of the study, the authors used PubMed, Cumulative Index to Nursing and Allied Health (CINAHL), the Cochrane Library, ProQuest Medical Library, and Science Direct from the year 2000 up to September 2009 as the main channel to search related journals, articles, and other comprehensive reports from the classic nursing and health-related databases such as. The numbers of keywords were used to obtain those articles including pain management, pain assessment tool, intubated and unconscious patient, and critically ill patient.

RESULT OF THE STUDY

Pain is considered the most frequent nursing diagnosis and the most common problem for patients in the clinical setting to seek help (Aslan et al., 2003). According to McCaffery (1968) as cited in Ferrel (1999) stated, "Pain is whatever the experiencing person says it is, existing whenever he says it does".

For instance, pain refers to an unpleasant, distressful and uncomfortable feeling. Studies have shown that unrelieved pain can affect the quality of life of the individual, cause physical and emotional effects, impact family, as well as increase the costs for health care, the individual and society (Ferrel, 1999).

As healthcare provider that have a long contact with the patient, nurses must considered pain as the fifth vital sign. This concern were based on the difficulty to develop appropriate pain management, particularly in the ICU setting, whereas the nonverbal patients, intubation, mechanical ventilation, or cognitively impaired patients have difficulties to provide self-report of pain (Mann, 2006).

Furthermore, the administering a variety of treatments and intervention in critical patient provide a significant pain to the patients. If patients were not manage appropriately, the unrelieved pain among critically ill patients can cause the discomfort,resulting in inadequate sleep, disorientation, exhaustion and possible physiological consequences (Pudas-Tähkä,

Axelin, Aantaa, Lund, & Salanterä, 2009). In short, it is vital for critical care nurses (CCNs) to deliver high quality care to the critically ill patient by using relevant technologies (medical treatment and equipments) and also incorporated with psychological care (Urden, Stacy, & Lough, 2002).

However, the development of appropriate pain management was often being a significant problem for most CCNs, because the quality of care will be depending on adequate assessment to determine the intensity and severity among critically ill patient (Coyer, Wheeler, Wetzig, & Couchman, 2007). For this reason, the essential strategies is required in order to deliver appropriate pain assessment for patient who admitted to ICU care setting (Shannon & Bucknall, 2003).

According to Cade (2008), critically ill patient mostly on sedated and intubated condition that make them unable to communicate their pain levels, either verbally or by pointing at visual pain scales. These situations provide the limitation to conduct pain assessment in this patient group. Initially, among critical care patients, nurses are recommended to determine the intensity and severity of pain level by observing the physiological and behavioral components of pain (Gelinas et al., 2004; Herr et al., 2006).

The physiological indicator can be easily documented in critical care settings by continuous monitoring blood pressure and heart rate. The increasing of both vital sign are considered as the common signs related to high levels of pain (Cade, 2008). While, behavioral indicators such as facial expression, body movement, rigid posture, and compliance with the ventilator or vocalization was considered as observable condition to significant level of pain (Gelinas et al., 2006; Gelinas et al., 2004). By addressed these components, it can improve the monitoring and documenting pain relief in pre and post intervention in order to identify appropriate pain management for critically ill patient.

In enlighten, CCNs also need to consider regarding pain that developed by nursing intervention. In one study by Puntillo (1990) as cited in Payen et al., (2001), the researcher stressed more than 60% rate their ICU pain as being moderate to severe in intensity. In relation with this evidence, initially, pain among critically ill patient due to their experiences with procedural pain, included turning position, central venous catheter insertion, wound drain removal, wound care, tracheal suctioning, and femoral sheath removal (Arroyo-Novoa et al., 2008; Puntillo et al., 2004).

Barriers of Pain Assessment and Management in Critical Care

In order to establish the effectiveness of pain management in critical care setting, CCNs need to recognize some barriers such as communication (Ahlers et al., 2008; Gelinas et al., 2006; Herr et al., 2006), technology, knowledge and time constraints (Shannon & Bucknall, 2003). For communication barrier, Pooler-Lunse and Price as cited in Shannon and Bucknall (2003) argued that critically ill patient who are unable to communicate are at high risk of suffering pain due to the intervention and several factors that already stated above.

The knowledge barrier, according Alpen and Titler as cited in Shannon and Bucknall (2003), they have stressed that assess nurses' and other healthcare professionals' was lack of knowledge in numerous aspects of pain management. This finding was support by Libreri as cited in Aslan et al. (2003) which concluded more than 50% of clinicians are not adequately knowledgeable about the management of patient pain, and do not take adequate measures to relieve it. For this reason, the effective assessment and management of pain requires through knowledge of its mechanisms, adverse affects and current therapies. The critical care nurse requires skills in assessment, communication and medication titration, together with a strong commitment and accountability to assess and individualize treatment (Shannon & Bucknall, 2003).

Furthermore, for technology barrier. Invasive technology can restrict the reliance on many behavioral indicators of pain, as the patient is often rendered unable to control

movements normally utilized to express pain. As technology can have a variable impact on the pain assessment process, an awareness of the potential implications is essential to enhance the positive aspects whilst taking into consideration the reality of the underlying physiology associated with prolonged pain (Shannon & Bucknall, 2003).

Finally, lack of time has been considered as a significant barrier to conduct pain assessment in the critical care area. CCNs frequently neglect pain assessment whilst attending more urgent patient needs. Recently, The American Pain Society (APS) has urge every health care providers must be considered pain as "the fifth vital sign" (Hutchison, 2007). This recommendation suggested viewing pain is urgent and important as other changes in vital signs to improve patient outcomes and quality of pain management. In addition, subsequent time constraints as a result of high work demands have been identified and influenced the nurse's ability to meet patient's pain management requirements (Shannon & Bucknall, 2003).

Pain Related Factor in Intensive Care Unit

Critical ill patient are considered experience with significant pain because most of them are suffering by complex problems in a life threatening condition (Ahlers et al., 2008). According to Young et al. (2006), this can be happened due to routine procedure and treatment that administer for patients. Puntillo et al. (2004) and Arroyo-Novoa et al. (2008) have been stressed that the common procedure which can produce significant pain intensity among critically ill patient includes tracheal suctioning, turning position/mobilization, central venous catheter insertion, wound drain removal, wound dressing change, placement of a central venous catheter, and femoral catheter removal. From this, among critically ill patient, healthcare professional should be able to determinethe procedural pain by observing behavioral activity, even if patients are unable to tell verbally (Puntillo et al., 2004).

Furthermore, among critically ill-intubated patients, the endotracheal suctioning were the most important factors that worried patients during their ICU stay (Payen et al., 2001). The presence of pain during tracheal suctioning has been demonstrated in the earlier study, which show mean of pain intensity with endotracheal suctioning was at moderate level on a 0–10 numerical rating scale (Puntillo, 1994). In addition, Arroyo-Novoa et al. (2008) stated that more than 30% from 57 patients was recalled the endotracheal suction as the discomforting intervention. Moreover, other procedure that often enhance pain in patient mobilization (Payen et al.). The painful character of these procedures was retrospectively attested to the significantly increased heart rate and blood pressure during mobilization in the present study (Hamill-Ruth & Marohn, 1999).In conclusion, healthcare professionals, particularly CCNs, are recommended to using the behavioral activity as a pain measurement strategy for critically ill-intubated patients. This strategy will provide information regarding the level of pain and patients discomfort in order to identifying the need for analgesic interventions or the effectiveness of nursing interventions. It is important to assure the pain relievers for the patients who must undergo potentially painful diagnostic or treatment-related procedures (Puntillo et al., 2004).

Pain Assessment Tools in Critically Ill-Intubated Patient

Patients with significant pain level are ought to have rapid recognition and treatment (Herr et al., 2006). Particularly in critically ill-intubated patients, exposuring to high levels of pain has been proven produce the negative psychological and physiological consequences, and increase the morbidity and mortality for patient (Shannon & Bucknall, 2003). Based on these consideration, health care providers such as nurses and physicians must be aware that the management of pain is a primary concern in critically ill patient (Gelinas et al., 2004).

According to Cade (2008), Gelinas et al. (2004), and Herr et al. (2006), the first intervention that should have accomplish for adequate pain relief is the systematic and accurate assessment of pain by using appropriate assessment tools. Pain should be routinely monitored, assessed, reassessed, and documented clearly to facilitate treatment and communication among healthcare providers (Herr et al.).Initially, self reported is the primary standard and remains as the most valid tool to interpret level of pain according to guideline that proposed by the International Association for the Study of Pain (Ahlers et al., 2008). However, the common existing pain scales are developed to measure level of pain in conscious patients (Aïssaoui, Zeggwagh, Zekraoui, Abidi, & Abouqal, 2005). It is being unusual when we apply in critically ill patient, especially patient with endotraceal intubated. The placement of a tube into the trachea (windpipe) in order to maintain opening airway in unconscious patients or those who unable to breathe spontaneously, it make them unable to report in verbally (Urden et al., 2002). Moreover, the difficulties to obtain accurate data regarding pain intensity and severity among critically ill-intubated patient influenced by such factors, included administering sedative agents, mechanical ventilation, and derivation level of consciousness (Gelinas et al., 2004; Shannon & Bucknall, 2003).

As mention above, pain assessment tools must be modified depend on the patient's ability (Herr et al., 2006). Some experts have developed and examined some tools in critically ill patients and considered that the behavioral indicators can be used for assessing pain in nonverbal patients (Herr et al., 2006). These tools included Behavioral Pain Scale or BPS (Aïssaoui et al., 2005), Critical-care Pain Observation Tool or CPOT (Gelinas et al., 2006), and PAIN (Pain Assessment and InterventionNotation) Algorithm (Puntillo et al. as cited in Li, Christine & Miaskowski, 2008). Regarding those tools, BPS and CPOT have been suggested by experts for using in critically ill-intubated and/or unconscious patients (Herr et al., 2006). The comparison among these tools will be described in table 1:

Table 1.*Comparison among BPS and CPOT*

Comparing factors	**BPS**	**CPOT**
Dimensional measures	Uni-dimensional	Uni-dimensional
Indicators to measured	1. Face 2. Restlessness 3. Muscle tones 4. Vocalization 5. Consolability	1. Facial expression 2. Body movement 3. Muscle tension 4. Compliance with ventilator or vocalization
Range of value	0-10	0-8
Validity of instrument	Content (face) and Construct validity	Content (face), Construct, and Criterion validity
Reliability of instrument	Inter-rater, Homogeneity, and Internal consistency reliability	Inter-rater reliability
Strengths of the assessment tool	Findings from 3 studies suggest that the BPS is a valid and reliable measure for use in nonverbal ICU patients	Easy to use and can be utilitized for verbalize patients and those who are intubated because the unique descriptors
Weaknesses of the assessment tools	• The lack of body movement equates with a painfree state • Research shows that nurses reported observing slow, decreased, or no movement as a pain behavior in nonverbal ICU patients. • Many factors (eg, weakness, use of sedatives) may influence a nonverbal ICU patient's ability to move their extremities	The responsiveness of behaviors to painful stimuli in deeply sedated patients remains to be determined.

Source: Li, Puntillo and Christine Miaskowski (2008) (Li, Puntillo, & Miaskowski, 2008)

Acording the Table 1, the useful of CPOT tool into verbalize patients and those who are intubated in critical care setting, makes this tool is more recommended to apply as the common assessment tools for assessing pain in critically ill-intubated and/or unconscious adult patients. The CPOT has been validated with two different samples of ICU patients, able to self-report or not. A hundred sixty patients with various diagnoses (trauma, surgical, or medical) was participated (Gelinas et al., 2006; Gélinas & Johnston, 2007). In these two studies, higher CPOT scores were obtained with a nociceptive procedure (turning with or without suctioning) compared with rest or a nonnociceptive procedure (noninvasive blood pressure). Interestingly, among mechanically ventilated patients, those who were conscious obtained higher CPOT scores compared with those who were unconscious. Moreover, for patients who were able to self-report, higher CPOT scores were observed for those who had pain compared with those who did not experience pain during the nociceptive procedure. However, there is only CPOT total scores were reported in these studies and not allowing to describe the specific behaviors expressed by the patients (Gélinas, Harel, Fillion, Puntillo, & Johnston, 2009).

Pharmacological and Non-Pharmacological Intervention of Pain in Critically Ill-Intubated Patient

There is a lack of research studies that directly focus on pain management in the critical care unit which has resulted in the development of consensus guidelines (Jacobi et al., 2002). This situation make a patients recall the experiencing pain during their time in intensive care in a significant number (Puntillo, 2003). Furthermore, the underestimate of CCNs regarding patient's pain (Aslan et al., 2003), produce the uncertainty to deliver appropriate pain management through out to patients. Moreover, CCNs should consider about the deleterious effects from pain. From this, CCNs will be aware in determine pain as the fifth vital sign when undertaking assessment (Shannon & Bucknall, 2003).

Initially, pain management provided by nurses to patient was clustered into pharmacological and non-pharmacological interventions (Hamilton, 2007). Pharmacological pain interventions will be included administration of analgesics, sedatives, and other agents. While, for non-pharmacological intervention, positioning and endotracheal suctioning (Gelinas et al., 2004), touch therapy, cutaneous stimulation with massage, heat or cold application, dim lights and a quiet environment, distraction, music therapy, and imagery were often used to promote patients' comfort (Mann, 2006; McCaffery, 1980). Additionally, Ramritu (2000), affirmed that the combination between pharmacological and non-pharmacological pain management will be enhanced patient comfort with provision that the CCNs should objectively measure the intensity of pain before the intervention.

Pharmacological treatments by using medications are the main method used for relief of pain. The World Health Organization (WHO) recommended that manage of acute pain should be follow the "pain ladder" (Black & Hawks, 2005). Non opioids, such as acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) are suggested as the first ladder step. If the pain persist or increase, suggest mild opioids (such as codeine) plus non opioids analgesics. If the pain continues to persist or increases, step 3 suggests strong opioids (common administer by parenteral) such as morphine with or without non opioids (Black & Hawks; Block et al., 2003).

Moreover, in critically ill-intubated patients the common analgesics used to reduce pain by using codeine, morphine, and fentanyl were the most often. While, acetaminophen, hydromorphone, and meperidine were used less often (Gelinas et al., 2004). However, according to the Society of Critical Care Medicine recommended morphine as the first-line agent and being a gold standard for both acute and chronic pain management because of its easy titration and can deliver in multiple routes of administration (Mann, 2006).

The used of opioids such as morphine frequently for relief of moderate to-severe pain resulting from tissue ischemia or injury, burns, and surgical procedures. This drug work by blocking neurotransmitters in the spinal cord, thus blocking pain perception in the central nervous system (Mann, 2006). However, all opioids produce side effect to some degree. Some side effects such as constipation, nausea, vomiting and drowsiness, decrease as the administration is continued. Other side effects (e.g. respiratory depression) are rare, and the incidence decreases precipitously with longer administration (Black & Hawks, 2005).

On contrary, for non-pharmacological management, health care providers such CCNs should provide some activity in term of reducing pain. Those activity are include relaxation, deep breathing, distraction, warmth and heat, cold pack, massage, music therapy, and etc (Black & Hawks, 2005). However, in critically ill-intubated patients, non-pharmacological interventions were not often used. There is only 1/3 patient which intervening by non-pharmacological interventions were used from previous studies in critical care patients (Gelinas et al., 2004). That is why the non-pharmacological role was only as adjuvant therapies that considered will improve the effectiveness of pain management among critical patients.

One common method that applied in reducing and relieving pain is using music therapy. Music clearly provides distraction and dissociation by focusing on the characteristics of the musical selection (Black & Hawks, 2005). Initially, music therapy was used to reduce psychophysiologic stress, pain, anxiety and isolation. Music therapy can be defined as a controlled form of listening to music, which can have an emotional affect on the person, both physiologically and psychologically, during treatment of illness or injury (Cardozo, 2004). Another study conducted by Almerud and Peterson(2003), also support this finding. The fall in systolic and diastolic blood pressure during the music therapy session and a corresponding rise after cessation of treatment.

Overall, music intervention was recommended as non-pharmacological pain management. This recommendation based on the consideration that music can influence the brain by prompting the secretion of endorphins, the body's own morphine. Music therapy also directed to slower heart rate, calmer and maintains the regular respiratory rate and lower blood pressure, and has even been shown to result in lower adrenaline levels, and reduced neuromuscular activity (Almerud & Petersson, 2003).

Nursing Roles and Activities for Appropriate Pain Management in Critically Ill-Intubated Patients

In order to develop effective pain management in critically ill-intubated patients, nurse need to follow systematic steps of nursing process. The nursing process includes assessment, diagnosis, planning, intervention, and evaluation. All these steps are involved as the nurse addresses pain management (Hamilton, 2007).

ASSESSMENT

Pain assessment has been called as the "fifth vital sign," joining temperature, pulse, respiration, and blood pressure. However, until we know more about the pain, we cannot fix the problem (Hamilton, 2007). In the assessment, CCNs responsible to collect the comprehensive data regarding pain that feel by the patient which included subjective and objective data (Joy, 2009).

For subjective data, nurses need to know pain threshold and pain tolerance level. Pain threshold is the intensity level where a person feels pain. While, pain tolerance is the intensity level or duration of pain the client is able or willing to endure. Furthermore, nurses should asses the location, onset and duration, quality and intensity of pain (Joy, 2009).

However, for critically ill-intubated patient who unable to report their problem, nurses are recommended more focus in the objective data. Nurses should be able to interpret the physiological and behavioral components by observing through out to patient (Gelinas et al., 2004). This type of assessment often presents a different picture

depending on the type of pain the client is experiencing.

In relation with the study, nurse will conduct assessment by following the condition, including during rest (R), intervention (tracheal suctioning, positioning, etc), and after developing intervention to the patients in three days of practice.

DIAGNOSIS

To develop an accurate diagnosis, nurses must conduct an appropriate assessment, focusing on the exact nature of the pain. If nurses can determine the specific diagnosis to the patient, it will be influence to the effectiveness of intervention to alleviate pain management and minimize complications for patients (Hamilton, 2007).

PLANNING AND INTERVENTION

When planning care, mutual goal setting with the client experiencing pain is utmost importance (Joy, 2009). Planning and interventions means setting goals by collaborating with clients and/or other healthcare professionals to provide specific measures to manage the pain. These interventions may be independent or collaborative. Independent nursing actions establish within the scope of nursing practice and include controlling the environment, giving emotional support, and providing comfort. Collaborative nursing actions involve cooperative interventions with other members of the healthcare team (Hamilton, 2007).

For this study, the nurse plan to establish pharmacological and non-pharmacological interventions as stated above. For collaborative intervention, nurses will administer analgesic and sedative agent as a primary intervention to relieve pain. While, for non-pharmacological intervention music therapy and others interventions are arranged in order to relieving pain among critically ill-intubated patients.

EVALUATION

Evaluation is one of the most critical phases of the nursing process. It will help nurses to determine whether interventions and pain management has been achieved an expected outcome or not (Hamilton, 2007). Here, nurses responsible to evaluate each step of plan to establish the most effective interventions. However, it may not always be realistic to achieve total relief, nurse only need make sure that patient will reach a level of comfort (Campbell & Osborn, 2009), at least pain score level will be ≤3 in pre and post-intervention (Erdek & Pronovost, 2004).

Furthermore, evaluation process will provide feedback that is essential to revise the plan of pain management (Hamilton, 2007). Here, nurses must conduct reassessment of pain and assessment of the patient's response to interventions by measure the improvement in the quality of pain management as compared to baseline assessments data. According to Joy (2009), the subsequent assessments will be useful in providing information regarding the effectiveness of the interventions. Therefore, the reassessment of pain should follow the same pattern used at baseline, including using the same tools to reinforce concepts that used during the assessment (Campbell & Osborn, 2009).

CONCLUSION

Pain is the common problem that can be found in hospitalized patient. Initially, patient own defines pain, because as subjective concept only person who experience with pain can be clearly describe it. However, the patient who have limitation to self report due to unable communicate pain problem in ICU setting, included mechanical ventilator and intubated patient. Health care professional, in particular CCNs should be able to established adequate pain management in critically-ill intubated patients by understanding any important signs and symptoms through to their senses of observation, hearing and touching.

RECOMMENDATION

The variety of pain assessments tools are available and have been used to document self-reporting of pain in intubated patients. However, it is need further review

in order to accomplished the assessment of pain in critical ill-intubated patients whether it can be applied or not. In addition, scoring that would be used for which patient (for example, ventilated, responsive, or unresponsive) also should be validated because several problems in critical ill patients which already stated above. In addition, in the absence of a patient's self-report, several researchers have used some tools such as BPS, CPOT, and PAIN Algorithm to assess level of pain in critical patients. However, American Society for Pain Management Nursing recommended both the BPS.

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